



ORIGINAL

David A. Gross  
Washington Counsel

AirTouch Communications  
1818 N Street N.W.  
Suite 800  
Washington, DC 20036

Telephone: 202 293-4955  
Facsimile: 202 293-4970

RECEIVED

1 FEB 24 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

DOCKET FILE COPY ORIGINAL

February 24, 1995

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, NW, Room 222  
Washington, DC 20554

Re: Petition of the People of the State of and the Public Utilities Commission  
of the State of California to Retain Regulatory Authority Over Intrastate  
Cellular Service Rates; PR Docket No. 94-105.

Dear Mr. Caton:

Attached hereto are an original and requisite copies of the redacted version of the "Comments of AirTouch Communications on the Confidential Data Submitted by the California Public Utilities Commission in Support of its Petition to Rate Regulate California Cellular Service" to be filed in the above-referenced proceeding.

If you have any questions regarding this matter, please do not hesitate to contact either Kathleen Abernathy (202-293-4960) or me.

Respectfully submitted,

David A. Gross

Attachments

cc: Service List

No. of Copies rec'd  
USA B O E

026

ORIGINAL  
RECEIVED

FEB 24 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of

Petition of the People of the State of  
California and the Public Utilities  
Commission of the State of California  
to Retain Regulatory Authority Over  
Intrastate Cellular Service Rates

PR Docket No. 94-105

DOCKET FILE COPY ORIGINAL

COMMENTS OF AIRTOUCH COMMUNICATIONS ON THE  
CONFIDENTIAL DATA SUBMITTED BY THE CALIFORNIA PUBLIC  
UTILITIES COMMISSION IN SUPPORT OF ITS PETITION  
TO RATE REGULATE CALIFORNIA CELLULAR SERVICE

REDACTED VERSION  
SUBMITTED PURSUANT  
TO PROTECTIVE ORDER

AIRTOUCH COMMUNICATIONS  
David A. Gross  
Kathleen Q. Abernathy  
1818 N Street, N.W.  
8TH Floor  
Washington, D.C. 20036  
(202) 293-3800

PILLSBURY MADISON & SUTRO  
Mary B. Cranston  
Megan Waters Pierson  
P.O. Box 7880  
San Francisco, CA 94120-7880  
(415) 983-1000

Attorneys for AirTouch  
Communications

February 24, 1995

### SUMMARY

The confidential submission of the California Public Utilities Commission ("CPUC") simply does not establish that market conditions unique to California support a special exception from the clear Congressional policy of permitting mobile service markets, including cellular, to develop unimpeded by state rate regulation. Indeed, the confidential submission is largely irrelevant because it cannot correct the fundamental flaws in the CPUC's competitive analysis. Moreover, the data demonstrate that the cellular industry in California reflects the characteristics of a competitive market: significant subscriber growth, declining prices, expanded service offerings and significant technological change to meet high demand.

In fact, it is undisputed that the demand for cellular service in California has been phenomenal and that California has attracted more CMRS providers than any other state. Under such circumstances, the CPUC has not, and indeed cannot, demonstrate that market conditions unique to California fail to protect subscribers. The confidential submission does not advance the CPUC's case, and thus the CPUC's Petition must be denied.

## TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION . . . . .	2
II. THE CPUC'S STATISTICS DO NOT SUPPORT ITS CLAIM THAT PRICES HAVE FAILED TO DECLINE WITH OPERATING COSTS . .	6
III. THE CPUC'S MARKET SHARE DATA CANNOT CORRECT THE FUNDAMENTAL ERRORS IN ITS ANALYSIS . . . . .	10
IV. THE CPUC DOES NOT UNDERSTAND NETWORK CAPACITY CONSTRAINTS . . . . .	14
V. THE AG EXCERPTS REFUTE, RATHER THAN SUPPORT, THE CPUC'S CONTENTIONS . . . . .	18
VI. CONCLUSION . . . . .	22

## TABLE OF AUTHORITIES

### Page(s)

#### Federal Communications Commission

First Confidentiality Order, PR Docket Nos. 94-103, 94-105, 94-106, 94-108, DA 95-111, adopted January 25, 1995; released January 25, 1995 . . . . .	2
Second Confidentiality Order, PR Docket Nos. 94-103, 94-105, 94-106, 94-108, DA 95-208, adopted February 9, 1995; released February 9, 1995 . . . . .	1, 2, 18
Cellular Auxiliary Service Offerings, 3 F.C.C.R. 7033 (1988) . . . . .	4
Cellular CPE Bundling Order, 7 FCC Rcd 4028 (1992) . . . . .	4
Cellular CPE NPRM, 1984 FCC LEXIS 2461, CC Dkt. No. 84-637, FCC 84-271 (released June 26, 1984) . . . . .	4
In the Matter of Implementation of Section 3(a) and 332 of the Communications Act-Regulatory Treatment of Mobile Services, Second Report and Order, 9 FCC Rcd 1411 (1994) . . . . .	1, 4, 5

#### California Public Utilities Commission

D.90-06-025 . . . . .	5
-----------------------	---

#### Statutes and Codes

California Government Code Section 11183 . . . . .	2
H.R. No. 103-111 . . . . .	5

#### Other Authorities

InfoWorld, "Briefly Noted," September 26, 1994 . . . . .	13
---	----

Network World, "WirelessCo Sprints to Lead in Broadband PCS Auction," D. Rohde, December 12, 1994 . . . . .	14
PR Newswire, "Sprint, TCI, Comcast and Cox Forge Unprecedented Communications Alliance," dated October 25, 1994 . . . . .	14
Telephony, vol. 227, no. 23, "Wireless Data: The Silent Revolution," P. Blake, December 5, 1994 . . . . .	13

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of

Petition of the People of the State of  
California and the Public Utilities  
Commission of the State of California  
to Retain Regulatory Authority Over  
Intrastate Cellular Service Rates

PR Docket No. 94-105

COMMENTS OF AIRTOUCH COMMUNICATIONS ON THE  
CONFIDENTIAL DATA SUBMITTED BY THE CALIFORNIA PUBLIC  
UTILITIES COMMISSION IN SUPPORT OF ITS PETITION  
TO RATE REGULATE CALIFORNIA CELLULAR SERVICE

Pursuant to Section 20.13 of the Commission's Rules and its Second Report and Order<sup>1</sup> and Second Confidentiality Order,<sup>2</sup> AirTouch Communications ("AirTouch") hereby submits comments on the confidential data submitted by the California Public Utilities Commission ("CPUC") in support of the Petition to Retain State Regulatory Authority Over Intrastate Cellular Service Rates ("Petition") filed on August 8, 1994.<sup>3</sup>

1 In the Matter of Implementation of Section 3(a) and 332 of the Communications Act-Regulatory Treatment of Mobile Services, Second Report and Order, 9 FCC Rcd 1411 (1994).

2 Second Confidentiality Order, PR Docket Nos. 94-103, 94-105, 94-106, 94-108, DA 95-208, adopted February 9, 1995; released February 9, 1995.

3 These comments address only the confidential information submitted by the CPUC which pertains to AirTouch.

## I. INTRODUCTION.

Six months of this proceeding have been consumed by the procedural morass created by the CPUC's unprecedented evidentiary submission. In stretching to meet its burden of proof, the CPUC ignored publicly available data from its own investigation because it did not match the CPUC's preconceptions regarding cellular service. Instead, the CPUC took the perverse step of releasing the cellular carriers' competitive data and current marketing plans to their direct competitors, while claiming that cellular carriers do not compete effectively.<sup>4</sup> The CPUC's release of such highly sensitive market data is symptomatic of its failure to understand the true nature of competition and its "regulate at all costs" approach to the cellular industry.

The CPUC's reckless attempt to meet its burden of proof has been in vain. The confidential submission simply does not advance the CPUC's case.<sup>5</sup> Indeed, the confidential submission

---

4 The CPUC submitted documents under seal which revealed the confidential data of the cellular carriers, not the CPUC. The CPUC also took the extraordinary step of obtaining confidential documents from the California Attorney General as part of an ongoing investigation and releasing those documents in violation of California Government Code Section 11183. The carriers were placed in the unprecedented position of trying to protect the confidentiality of their own data while being denied access to the data. Second Confidentiality Order (mimeo) at 11-12, 14-15 (¶¶19, 25).

5 The CPUC has had more than a full and fair opportunity to meet its burden of proof. All of the CPUC's confidential data has been accepted into the record except for the data relating to the specific numbers of subscribers on discount rate plans, which the FCC has found to be irrelevant to the CPUC's Petition. First Confidentiality Order (mimeo) at 17-18, 20-23 (¶¶24-26, 28-34).



is largely irrelevant because it cannot correct the fundamental flaws in the CPUC's competitive analysis. Moreover, the data demonstrate that the cellular industry in California reflects the characteristics of a competitive market: rapidly increasing volume, declining prices, expanded service offerings and significant technological change. The CPUC's confidential data demonstrate that:

- Cellular service in California has grown phenomenally each year, demonstrating customers' satisfaction with rates and service.
- Cellular carriers in California have introduced technological innovations to meet the tremendous demand while maintaining the high quality of cellular service.
- Prices for cellular service in California continue to decline and the vast majority of cellular customers subscribe to discount plans affording significant savings off the basic rate.
- Cellular carriers in California compete vigorously on the basis of coverage, service quality and technological innovation, as well as price.
- Cellular carriers in California are responding to competition from Nextel by offering customers innovative plans affording greater savings.

In fact, the CPUC's submission demonstrates that the single constraining factor on effective competition is the CPUC's own regulation. The CPUC's inability to recognize that it was submitting evidence adverse to its own case demonstrates that it does not understand the nature of competition in a duopoly market. Its analysis reflects similar erroneous assumptions about competition in the new, unrestricted wireless marketplace.

The CPUC simply has not met its burden of proof. Congress permitted only limited exceptions to its preemption of state

regulation of rates and entry. The CPUC must demonstrate that "market conditions" will "fail to protect subscribers adequately."<sup>6</sup> Yet, the CPUC has identified characteristics attributable to all duopoly markets as the basis for its Petition, not "market conditions" unique to California. Congress clearly was aware of the duopoly market structure when it established universal preemption. A finding that continued state regulation is warranted by the CPUC's showing would nullify the Congressional standard and require continued regulation in every state that asks for it. The CPUC essentially contends that in a duopoly market competition can never "adequately" protect subscribers. The CPUC fails to acknowledge, as recognized by the Commission, that competition within the cellular marketplace, even constrained by the duopoly market structure, does exist.<sup>7</sup>

---

6 Section 332(c)(3) of the Communications Act of 1934, as amended.

7 See Cellular Auxiliary Service Offerings, 3 F.C.C.R. 7033, 7038 (1988) ("in a competitive market, such as exists in mobile communications services, market forces compel service providers to offer the quality and quantity of products sought by customers."); Cellular CPE NPRM, 1984 FCC LEXIS 2461, CC Dkt. No. 84-637, FCC 84-271 (released June 26, 1984) ("cellular operating companies do not possess a monopoly of bottleneck facilities; each will be competing against a nonwireline carrier. . . ."); Cellular CPE Bundling Order, 7 FCC Rcd 4028, 4029 (1992) ("It appears that facilities-based carriers are competing on the basis of market share, technology, service offering and service price"); Second Report and Order at ¶¶174-177 (" . . . there is no record evidence that indicates a need for full scale regulation of cellular or any other CMRS offerings . . . [T]he record does establish that there is sufficient competition in this marketplace to justify forbearance from tariffing requirements...Cellular providers do face some competition today, and the strength of the competition will increase in the near future . . . In light of the social (continued...)

The CPUC's confidential submission simply does not establish market conditions unique to California which support a special exception from the clear Congressionally established federal policy of permitting mobile service markets, including cellular, to develop unimpeded by state rate regulation. To the contrary, market conditions in California are even more favorable to competition than in other states. Congress determined that "[i]n assessing . . . whether market conditions in a state fail to protect subscribers of commercial mobile services adequately, the FCC shall take into account such factors as the number of such subscribers in proportion to the total population of a service area and the number of market entrants providing such services."<sup>8</sup> The undisputed evidence demonstrates that the demand for cellular service in California has been phenomenal and that California has attracted more CMRS providers than any other state.<sup>9</sup> Under such circumstances, the CPUC cannot clear the "substantial hurdles"<sup>10</sup> necessary to

---

7(...continued)

costs of tariffing, the current state of competition, and the impending arrival of additional competition, particularly for cellular licensees, forbearance from requiring tariff filings from cellular carriers . . . is in the public interest.)

The CPUC appears to disavow its prior finding that "[e]xperience has shown that cellular providers are willing to provide high-quality performance . . . [t]he incentive for such willingness is the carriers' desire to keep the customer from switching to a competitor. D.90-06-025, Finding of Fact 27; see also Ordering ¶133.

8 H.R. No. 103-111 at 588.

9 CPUC Petition at 35, 65-66.

10 Second Report and Order at 1421.

continue, much less augment, regulation of rates for cellular service in California.

The CPUC should not be permitted to continue its misguided regulation. Indeed, recent experience demonstrates that consumers will reap the rewards of deregulation. Since Massachusetts decided to deregulate five months ago, consumers have benefitted from price reductions of about 12%.<sup>11</sup> There is no reason that California consumers should not also enjoy the benefits of unimpeded wireless competition.

II. THE CPUC'S STATISTICS DO NOT SUPPORT ITS CLAIM THAT PRICES HAVE FAILED TO DECLINE WITH OPERATING COSTS.

The CPUC has submitted data regarding revenues per subscriber in support of its claim that "stagnant or slowly declining cellular prices must be examined in the context of lower costs."<sup>12</sup> The CPUC's own data--when correctly analyzed, on a percentage basis--demonstrates that reductions in cellular service prices have exceeded that of operating costs.

In order to distort the results of its analysis, the CPUC relied solely on basic rate plans,<sup>13</sup> despite the fact that the vast majority of cellular customers in the major California MSAs subscribe to the discount plans which provide significantly

---

11 See Affidavit of Professor Jerry A. Hausman, attached hereto as Appendix A (hereinafter "Hausman Affidavit"), at ¶23.

12 CPUC Petition at 34. The CPUC submitted annualized per-subscriber data including revenues, operating expenses, operating income, and expenditures for plant. See Appendix H.

13 Yet, even as to those plans, the CPUC concedes that the price for cellular service has declined by an average of 14.9%. CPUC Petition at 34.

greater savings. The CPUC data<sup>14</sup> demonstrate that by the end of 1993 only [ ] of AirTouch customers in Los Angeles, [ ] in San Diego and [ ] in San Francisco remained on the basic plan.<sup>15</sup> This migration to discount plans accelerated in 1994.<sup>16</sup> During the pendency of the CPUC's petition, AirTouch has filed 16 new service plans affording customers greater choice and savings. Thus, the CPUC's reliance on the basic rate plans in its comparison of prices to costs is misleading.

The alternative plans provide discounts designed for certain levels of cellular usage so the customers can select the best plan for his or her specific needs. The CPUC attempts to dismiss the savings offered by the discount plans because they are subject to conditions, usually a one year term. The basic plans remain available, yet consumers with full knowledge of the conditions continue to select the discount plans because they offer better value. The discount plans are exactly the type of marketing tool expected in a competitive industry and are commonly used by cellular providers in other states and long distance providers. Only the CPUC fails to recognize the pro-competitive effect of these plans.<sup>17</sup>

---

14 The CPUC submitted confidential data regarding the number of subscribers provided with service by each carrier on each basic rate plan and the aggregate number of customers associated with all discount plans of a given carrier. CPUC Petition, Appendix J.

15 See CPUC Petition, Appendix J, pp. J-4, J-16, referring to the Los Angeles SMSA, Bay Area Cellular Telephone Company and AirTouch Cellular.

16 Hausman Affidavit at ¶15.

17 Hausman Affidavit at ¶16.

Examination of the relevant prices offered in the plans actually utilized by the majority of cellular customers in California reveals significant savings. Indeed, comparison of data in AirTouch's Los Angeles market reveals that from 1990 to 1993 the price decrease is almost five times greater than the decrease in operating expenses. Based on 200 minutes of use in Los Angeles, the price in nominal terms fell by 12.0% between 1990 and 1993. In real terms,<sup>18</sup> prices fell by 20.0% over the same period. In contrast, the CPUC's data<sup>19</sup> indicate that over this time period the nominal operating expenses per subscriber decreased by only 2.5% for AirTouch in Los Angeles.<sup>20</sup>

Customers with lower levels of usage benefitted from similar price declines. For a 100 minute per month user, nominal prices decreased by 9.4% between 1990 and 1993 and real prices decreased by 17.6% over the same period.<sup>21</sup> For a 10 minute per month user, nominal prices decreased by 8.0% and real prices decreased by 16.3%.<sup>22</sup> Thus, cellular prices decreased, contrary to the CPUC's claim, and the decrease far exceeded AirTouch's decrease in operating expenses per subscriber in the Los Angeles market. This is despite the fact that the CPUC's

---

18 This calculation is based on the BLS CPI-U index of inflation. See Hausman Affidavit at ¶3.

19 CPUC Petition, Appendix H, p. H-1.

20 Hausman Affidavit at ¶3.

21 Id. at ¶4.

22 Id.

regulations limited pricing flexibility, and added costs to the provision of service.

The CPUC's comparison of prices to income generated per subscriber is similarly flawed. In Los Angeles, AirTouch's plant investment per subscriber remained roughly constant from 1990 to 1993, decreasing from \$1,088 per subscriber in 1990 to \$1,022 in 1993.<sup>23</sup> During the same time period, operating expenses decreased slightly from \$674 per subscriber to \$657.<sup>24</sup> In contrast, operating income per subscriber during this period decreased 47%, from \$679 to \$358.<sup>25</sup> The decrease in income resulted from the spread arising from the discount plans and the fact that more recent cellular customers tend to use the service less, leading to lower revenue per subscriber. Thus, while operating expenses declined by 3% and plant expenses were reduced by 6%, average income per subscriber has declined by 47%. Thus, the CPUC's data demonstrate that, as a result of effective competition between the carriers, income per subscriber decreased despite stable expenses. The reduction in income is directly attributable to the discount plans offering consumers significant savings which the CPUC chooses to ignore. The CPUC's data simply do not support its contention.

---

23 CPUC Petition, Appendix H; Hausman Affidavit at ¶7.

24 Id.

25 Id.

### III. THE CPUC'S MARKET SHARE DATA CANNOT CORRECT THE FUNDAMENTAL ERRORS IN ITS ANALYSIS.

The CPUC has released calculations of market concentration ratios<sup>26</sup> and market share<sup>27</sup> which it contends demonstrate that cellular carriers have market power. The CPUC's calculations are meaningless because they are based on fundamentally flawed assumptions. The CPUC relies on a static analysis of current market share as a measurement of future market power despite the rapid competitive changes in the wireless marketplace. Instead of doing a forward looking analysis of the potential capacity of all wireless competitors, the CPUC focused on market shares of the two current cellular carriers in each MSA. Cellular's current market share is the product of structural barriers to entry which have been eliminated and is thus irrelevant. This fundamental fact underlies Congress' determination, expressed by Section 332, that even where there is only a cellular duopoly, state rate regulation should be eliminated to ensure that similar services are accorded similar regulatory treatment.

The CPUC did calculate the Herfindahl-Hirschman Index ("HHI") considering projections of ESMR and PCS providers share in the market.<sup>28</sup> However, in adopting this approach the CPUC

---

26 CPUC Petition, Appendix D.

27 CPUC Petition, Appendix E.

28 The CPUC computed market shares and concentrations based on a forecast by the Personal Communications Industry Association ("PCIA") for the number of subscribers for cellular, PCS, ESMRs and satellite services. CPUC Petition at 75-78. The PCIA forecasts are speculative, thus undermining the reliability of the CPUC's calculations. Capacity is a more accurate measurement of the potential competitive significance of a firm  
(continued...)



failed to recognize that competition takes place at the margin.<sup>29</sup> The economic factors which determine the competitive impact of a new entrant are supply elasticity and demand elasticity.<sup>30</sup> Nextel and PCS providers will have more than enough supply capacity to serve all new customers, given their digital networks which have greater capacity than current cellular analog networks. Similarly, demand acceptance already exists for PCS as demonstrated by the explosive growth for PCS in the United Kingdom<sup>31</sup> where 25% of new mobile activations in 1994 were attributable to PCS. Cellular prices decreased by 30% over the same period.<sup>32</sup> Thus, the CPUC's reliance on HHIs is an incorrect approach to determine the likely present and future competitive effects of Nextel and PCS in California.

In any event, since the number of existing and potential competitors is greater in California than in most of the nation, and thus the HHI is lower in California than the national average, Congress' finding that there is sufficient competition to require preemption of state rate regulation certainly must apply to California. In fact, based on these market conditions it would be unlawful under the Congressional standard to conclude that the California cellular marketplace "fail[s] to

---

28(...continued)  
since it clearly indicates the limits of the firm's ability to expand into the marketplace.

29 CPUC Petition at 75; Hausman Affidavit at ¶15.

30 Hausman Affidavit at ¶15.

31 Hausman Affidavit at ¶15.

32 Hausman Affidavit at ¶15.

protect subscribers adequately from unjust and unreasonably discriminatory rates." If the California marketplace--the most competitive wireless market in the U.S.--is found insufficient to protect consumers adequately, then the FCC would have decided that no state can meet the statutory test and Congressional intent would be completely undermined.

The CPUC also concludes that the marketplace fails because cellular carriers are gaining market share while resellers' market share declines.<sup>33</sup> The CPUC artificially divides the market in its analysis by calculating different indices for the resellers and the cellular carriers and excluding other competitors in the cellular retail marketplace, including other distributors such as large retail chains. The CPUC's analysis is, at best, inconclusive.

The CPUC has failed to demonstrate any correlation between resellers' market share and effective price competition, nor has the CPUC provided any analysis of the efficiency of the resellers' operations as compared to other distribution channels. Notably, the CPUC cannot explain why in MSAs outside of California where there are lower rates resellers have almost no market share. Furthermore, a decline in the resellers' market share demonstrates neither a failure to compete by cellular carriers nor a failure of market conditions to protect subscribers. Indeed, the resellers' loss of market share is consistent with active competition between more efficient competitors. It is important to recognize that this decline for

---

33 CPUC Petition at 31-34.

resellers has occurred despite the CPUC's imposition of a mandatory margin, between 14-38% on access and 18-38% on usage, that is unique to California and insulates resellers from effective competition.<sup>34</sup> The CPUC's preferential treatment of cellular resellers has protected inefficient competitors at the cost of higher rates for consumers.<sup>35</sup>

In summary, the CPUC's market share analysis does not demonstrate that the marketplace fails to protect subscribers. The HHI calculation is of limited usefulness in the wireless marketplace because of the rapidly changing technology and new entry.<sup>36</sup> Indeed, market developments since the CPUC filed its Petition demonstrate that calculations of current market share will soon be rendered obsolete. New entrants such as Nextel, Pacific Bell and Cox are aggressively entering the marketplace:

- Nextel has built out its network and inaugurated statewide digital service.<sup>37</sup>
- Pacific Telesis, the largest wireline provider in the state, has contracted with the world's largest wireless system design company to build its PCS system.<sup>38</sup>
- Cox, the pioneer's preference recipient in Southern California, and its other cable partners in the PCS

---

34 Hausman Affidavit at ¶14.

35 Hausman Affidavit at ¶14.

36 See Hausman Affidavit at ¶15.

37 InfoWorld, "Briefly Noted," September 26, 1994, at 3. See also Telephony, vol. 227, no. 23, "Wireless Data: The Silent Revolution," P. Blake, December 5, 1994, at 26.

38 Network World, "WirelessCo Sprints to Lead in Broadband PCS Auction," D. Rohde, December 12, 1994, at 4.

alliance, Comcast and TCI<sup>39</sup> have already begun upgrading their networks.

These market developments within the past six months demonstrate that market conditions in California are among the most competitive. With more new entrants in California than in most other states, the CPUC cannot demonstrate that the California cellular market is somehow less competitive than the national norm, and therefore should be exempt from Congress' mandate to eliminate state rate regulation.

#### IV. THE CPUC DOES NOT UNDERSTAND NETWORK CAPACITY CONSTRAINTS.

The CPUC submitted capacity utilization data that it contends support its claim that cellular systems in California do not face capacity constraints, and thus additional customers could have been added to the systems had prices been lower.<sup>40</sup> The CPUC alleges that certain cell sectors in Los Angeles were "underutilized" in 1993.<sup>41</sup> In order to make this claim, the CPUC simply ignores the evidence of capacity constraints at high use cell sites. The CPUC's statistics reveal capacity utilization for high use cell sites on AirTouch's Los Angeles and San Diego systems of [ ] and [ ], respectively.<sup>42</sup> In light of these statistics, it is incredible that the CPUC would blindly advocate a higher level of utilization. The CPUC

---

39 PR Newswire, "Sprint, TCI, Comcast and Cox Forge Unprecedented Communications Alliance," dated October 25, 1994.

40 CPUC Petition at 51.

41 CPUC Petition at 51.

42 CPUC Petition, Appendix M, p. M-3.

apparently believes that there should be 100% utilization at each cell site, despite the inevitable increase in blocked and dropped calls and degradation of voice quality that would result. The CPUC's simplistic approach betrays a fundamental ignorance of cellular network design, the unpredictability of customer usage patterns and the actual evidence of the carriers' expansion efforts.

Despite the CPUC's simplistic conclusion, capacity<sup>43</sup> is difficult to calculate because it involves making assumptions about many constantly changing variables like subscriber calling behavior, system design and environmental constraints,<sup>44</sup> roamers, and desired service levels. Since not all subscribers use the system in the same place at the same time, the capacity of the system naturally is greater than the number of voice channels that the system has available to handle calls. However, subscriber usage is not spread evenly over all cells, and some cells will not be capable of serving as many subscribers as theoretically possible. As a cellular system becomes more complex, the calculation of system capacity also increases in complexity.

The CPUC's simplistic analysis fails to consider the critical role of capacity in ensuring high quality services.

---

43 The capacity of a cellular system is defined as the number of calls which can be handled during a defined period of time, in a given area, at a specific level of service quality.

44 Every time an optimal cell site location cannot be obtained, the realizable capacity of the cellular system is reduced. Without the right sites, the degree of frequency reuse is reduced and thus channel capacity is constrained.

Capacity enables the carrier to increase coverage, decrease occurrences of dropped and blocked calls and enhance transmission quality. The CPUC does not recognize that measurements of system capacity utilization and system performance must take into consideration that areas of heavy demand require large investments.<sup>45</sup>

The CPUC's contention that certain cells of a system are less utilized than others is not proof that the system is underutilized. The low and medium use cell sites upon which the CPUC relies are irrelevant to a consideration of capacity utilization given the commuting patterns of cellular users.<sup>46</sup> Indeed, one of the most significant variables affecting capacity is the distribution of call attempts by subscribers throughout a CGSA.

For example, in Los Angeles, 19% of subscriber usage is concentrated in less than 1% of the area served, causing inevitable blocking problems. As of the end of 1993, AirTouch experienced a subscriber growth rate of 37% in Los Angeles.<sup>47</sup> In the past year, AirTouch experienced an even greater growth rate<sup>48</sup> in that market. Cellular systems are designed to achieve a 3% level for blocked calls; however, AirTouch's Los Angeles system has experienced blockage levels of up to [ ] in certain congested areas, despite the construction of hundreds of

---

45 Hausman Affidavit at ¶10.

46 Id. at ¶10.

47 Hausman Affidavit ¶ 9.

48 Id. at ¶9.

cell sites and introduction of frequency reuse techniques to increase capacity.<sup>49</sup> The overall increase in demand sought by the CPUC would not selectively increase usage on the "underutilized" cell sites while avoiding the high use sites.

The existence of excess capacity is also consistent with the nature of optimal network planning. Indeed, the CPUC's data demonstrate that plant investment per subscriber and operating cost per subscriber have remained essentially constant.<sup>50</sup> Cellular service does not experience economies of scale, and thus additions to capacity through network expansion are most efficiently made in "lumpy investments."

Moreover, the CPUC's claim that carriers are intentionally restricting supply is contradicted by the market evidence. The CPUC has submitted annualized subscriber growth for each carrier in each market which reflects extraordinary growth, from 35% to 169% on AirTouch's systems.<sup>51</sup> This rapid growth of a discretionary service demonstrates that customers find that cellular carriers offer good value for the price and that carriers have responded with technological innovations to meet that demand.<sup>52</sup> By splitting cells and reusing channels<sup>53</sup> in

---

49 Id. at ¶10.

50 Id. at ¶7.

51 See CPUC Petition, Appendix H.

52 Hausman Affidavit at ¶9.

53 AirTouch has implemented a number of techniques to increase frequency reuse, including: cell splitting, sectorization, antenna downtilting, overlay/underlay operation, and dynamic cell site power control.

the areas experiencing the highest level of usage, cellular carriers have increased capacity and lowered prices. Indeed, Los Angeles prices are 10% lower than New York, a regulated market facing similar capacity constraints.<sup>54</sup> The expansion of capacity in AirTouch's Los Angeles system from 1984 to 1994 refutes the CPUC's claim that carriers are restricting supply:

- The total number of customers has expanded from 15,000 to over [        ].
- The total number of cell sites has increased from 13 to 415.
- Square miles covered has increased from 6,235 to 9,074.
- Capital expended on the system has increased from \$10 million to approximately \$550 million.
- Capacity utilization has exceeded [    ].<sup>55</sup>

In sum, analysis of capacity utilization, blocked calls, and evidence of system expansion demonstrate that cellular carriers are striving to meet extraordinary consumer demand while maintaining high quality service.

V. THE AG EXCERPTS REFUTE, RATHER THAN SUPPORT, THE CPUC'S CONTENTIONS.

The CPUC has submitted confidential documents obtained from the California Attorney General which consist of the marketing plans and competitive analysis of cellular carriers.<sup>56</sup> The CPUC concedes that these documents do not reflect anticompeti-

---

54 Hausman Affidavit at ¶12.

55 Hausman Affidavit at ¶9.

56 Second Confidential Order at 12-13.



tive behavior.<sup>57</sup> Indeed, the documents do not even support the CPUC's contentions. Instead, the documents reflect effective competition between the cellular carriers.

[CONFIDENTIAL DATA REDACTED]

---

57 CPUC "Petition for Clarification with Corresponding Extension of Time," dated January 27, 1995, at 4.